



COMPLEX METADATA MANAGEMENT



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(the PEPFAR installation of DHIS 2)

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1.

THE PROBLEM

Category

Category option

Create, modify, view and delete category options. Category options are options with in category.



Category

Create, modify, view and delete data element categories. Categories are used for disaggregation of data elements.



Category option group

Create, modify, view and delete category option groups, which can be used to classify category options.



Category option group set

Create, modify, view and delete category option group sets, which can be used for improved data analysis.



METADATA MAINTENANCE

METADATA MAINTENANCE

- ▶ category options
- ▶ category option combos
- ▶ category option groups
- ▶ category option group sets
- ▶ user groups
- ▶ sharing and administration of the above

```
1 {
2   "General": {
3     "Version": 1.0,
4     "DateCreated": "2017-02-09T18:25:43.5
5   },
6   "Mechanisms": [
7     {
8       "HQMechanismID": 9183,
9       "LegacyMechanismID": 9149,
10      "OperatingUnits": [
11        "Uganda"
12      ],
13      "COPVersions": [
14        {
15          "FiscalYear": 2013
16          "PlanningReporting
17          "ImplementingMech
18          "PrimePartner": "
19          "PrimePartnerID"
20          "StartDate": "20
21          "EndDate": "201
22          "FundingAgency"
23          "Active": 1
24        },

```

MECHANISM INPUT

INPUT IN VARIOUS FORMS

- ▶ csv
- ▶ csd
- ▶ json (soon)

MECHANISM METADATA

- ▶ name
- ▶ code
- ▶ fiscal year
- ▶ country*
- ▶ agency
- ▶ partner
- ▶ start and end dates
- ▶ active or not

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2.

A SOLUTION IN
THREE PARTS

```
19:00:01.684 ACTION Starting Mechanism Import at 2018-06-19 19:00:01.684
19:00:01.684 ACTION Mechanism Importer version 1.1.0a
19:00:01.684 ACTION Input: /home/ingest/prod/input/FACTSInfoNightlyMechanism.csv
19:00:01.684 ACTION Output: https://www.datim.org:443
19:00:01.685 ACTION Properties: /etc/mechanismImporter/mechanismImporter.properties
19:00:04.607 ACTION Preloading cache.
19:00:19.447 ACTION Preloaded 3324 mechanisms.
19:00:20.802 ACTION Preloaded 797 agencies and partners.
19:00:20.830 ACTION Preloaded 6 categoryOptionGroupSets.
19:00:30.990 ACTION Preloaded 9506 user groups.
19:01:02.332 ACTION Preloaded 72 organisationUnits.
19:01:02.870 ACTION Processsing 10907 import lines, 3808 mechanisms, 3310 in 35 OUs, 15 agencies, and 69
19:01:02.870 ACTION Agencies:
19:01:02.871 ACTION OUs:
19:01:02.871 ACTION Angola (33): DOD (2), HHS/CDC (14), USAID (17)
19:01:02.871 ACTION Asia Regional Program (24): DOD (1), HHS/CDC (13), HHS/HRSA (2), PC (1),
19:01:02.871 ACTION Botswana (101): DOD (6), HHS/CDC (42), HHS/HRSA (7), PC (3), State/AF (3)
19:01:02.871 ACTION Burma (25): HHS/CDC (9), USAID (16)
19:01:02.872 ACTION Burundi (37): DOD (8), State/AF (1), State/SGAC (1), USAID (27)
19:01:02.872 ACTION Cambodia (33): HHS/CDC (12), HHS/HRSA (1), USAID (20)
19:01:02.872 ACTION Cameroon (51): DOD (5), HHS/CDC (28), HHS/HRSA (1), PC (3), State/AF (
19:01:02.872 ACTION Caribbean Region (92): DOD (5), DOL (1), HHS/CDC (45), HHS/HRSA (4), f
19:01:02.872 ACTION Central America Region (62): DOD (13), HHS/CDC (12), PC (7), State/WHP
19:01:02.872 ACTION Central Asia Region (33): HHS/CDC (18), PC (1), USAID (14)
19:01:02.872 ACTION Cote d'Ivoire (130): DOD (5), HHS/CDC (70), HHS/HRSA (6), State/AF (2
19:01:02.872 ACTION Democratic Republic of the Congo (71): DOD (4), HHS/CDC (20), State/A
19:01:02.872 ACTION Dominican Republic (43): DOD (6), HHS/CDC (17), PC (1), USAID (19)
19:01:02.872 ACTION Ethiopia (181): DOD (4), HHS/CDC (77), HHS/HRSA (5), PC (2), State
19:01:02.872 ACTION Ghana (51): DOD (4), HHS/CDC (17), PC (1), State/AF (2), USAID (2
19:01:02.872 ACTION Haiti (79): HHS/CDC (37), HHS/HRSA (2), State/SGAC (1), USAID (39)
19:01:02.872 ACTION India (45): DOL (1), HHS/CDC (18), HHS/HRSA (2), USAID (24)
19:01:02.873 ACTION Indonesia (29): DOD (5), USAID (24)
19:01:02.873 ACTION Kenya (240): DOD (13), HHS/CDC (128), HHS/HRSA (13), PC (3), St
19:01:02.873 ACTION Lesotho (69): DOD (6), HHS/CDC (22), PC (3), State/AF (1), Sta
19:01:02.873 ACTION Malawi (128): DOD (10), HHS/CDC (36), HHS/HRSA (6), PC (3), St
19:01:02.873 ACTION Mozambique (210): Commerce (1), DOD (10), HHS/CDC (69), HHS/HR
19:01:02.873 ACTION Namibia (120): DOD (5), HHS/CDC (46), HHS/HRSA (7), PC (3), S
19:01:02.873 ACTION Nigeria (134): DOD (4), HHS/CDC (52), HHS/HRSA (1), State/AF
19:01:02.873 ACTION Papua New Guinea (12): HHS/CDC (5), HHS/HRSA (2), State/EAP (1
19:01:02.873 ACTION Rwanda (54): DOD (8), HHS/CDC (22), PC (1), State/PRM (2),
19:01:02.873 ACTION South Africa (228): DOD (5), HHS/CDC (103), HHS/HRSA (6), H
19:01:02.874 ACTION South Sudan (45): DOD (12), HHS/CDC (18), State/SGAC (1), U
19:01:02.874 ACTION Swaziland (79): Commerce (1), DOD (6), DOL (1), HHS/CDC (1
19:01:02.874 ACTION Tanzania (244): DOD (12), HHS/CDC (123), HHS/HRSA (8), HHS
19:01:02.874 ACTION Uganda (180): DOD (10), HHS/CDC (68), HHS/HRSA (4), HHS/N
19:01:02.874 ACTION Ukraine (70): DOD (6), HHS/CDC (23), HHS/HRSA (6), HHS/N
19:01:02.874 ACTION Vietnam (86): DOD (8), HHS/CDC (38), HHS/HRSA (1), HHS/N
19:01:02.874 ACTION Zambia (216): DOD (8), HHS/CDC (90), HHS/HRSA (10), HHS
19:01:02.874 ACTION Zimbabwe (75): HHS/CDC (30), HHS/HRSA (5), State/AF (3),
```

CONFIGURE METADATA

MODEL MECHANISMS

- ▶ category option and category option combo
- ▶ creates with name, dates, organisation unit
- ▶ changes these when upstream changes
- ▶ assigns to correct agency and partner via category option groups
- ▶ configures sharing

MODEL PARTNERS

- ▶ category option group and user groups
- ▶ creates with name
- ▶ changes name when upstream changes
- ▶ configures user groups
- ▶ configures sharing

MODEL AGENCIES

- ▶ category option group and user groups
- ▶ creates with name
- ▶ configures user groups
- ▶ configures sharing

CONFIGURE COUNTRIES

- ▶ changes country when it is obsolete
- ▶ configures user groups
- ▶ configures sharing

All Users

Active Users

Disabled Users

17620 Users found

Edit

x

Active

Edit

✓

Disabled

Edit

x

Active

Edit

✓

Disabled

Edit

x

Active

Edit

✓

ADMINISTER USERS

PARTNER USER ADMINS

- ▶ partner user administrators can manage their partner users in the same country
- ▶ in the future, there may be global user groups for each partner that allow seeing between countries

AGENCY USER ADMINS

- ▶ country agency user administrators can manage their agency users in the same country
- ▶ country agency user administrators can manage partner users in the same country if and only if all of the partner's mechanisms are associated with their agency
- ▶ global agency user administrators can manage all users in their agency in any country

COUNTRY USER ADMINS

- ▶ country (interagency) user administrators can manage country users

GLOBAL USER ADMINS

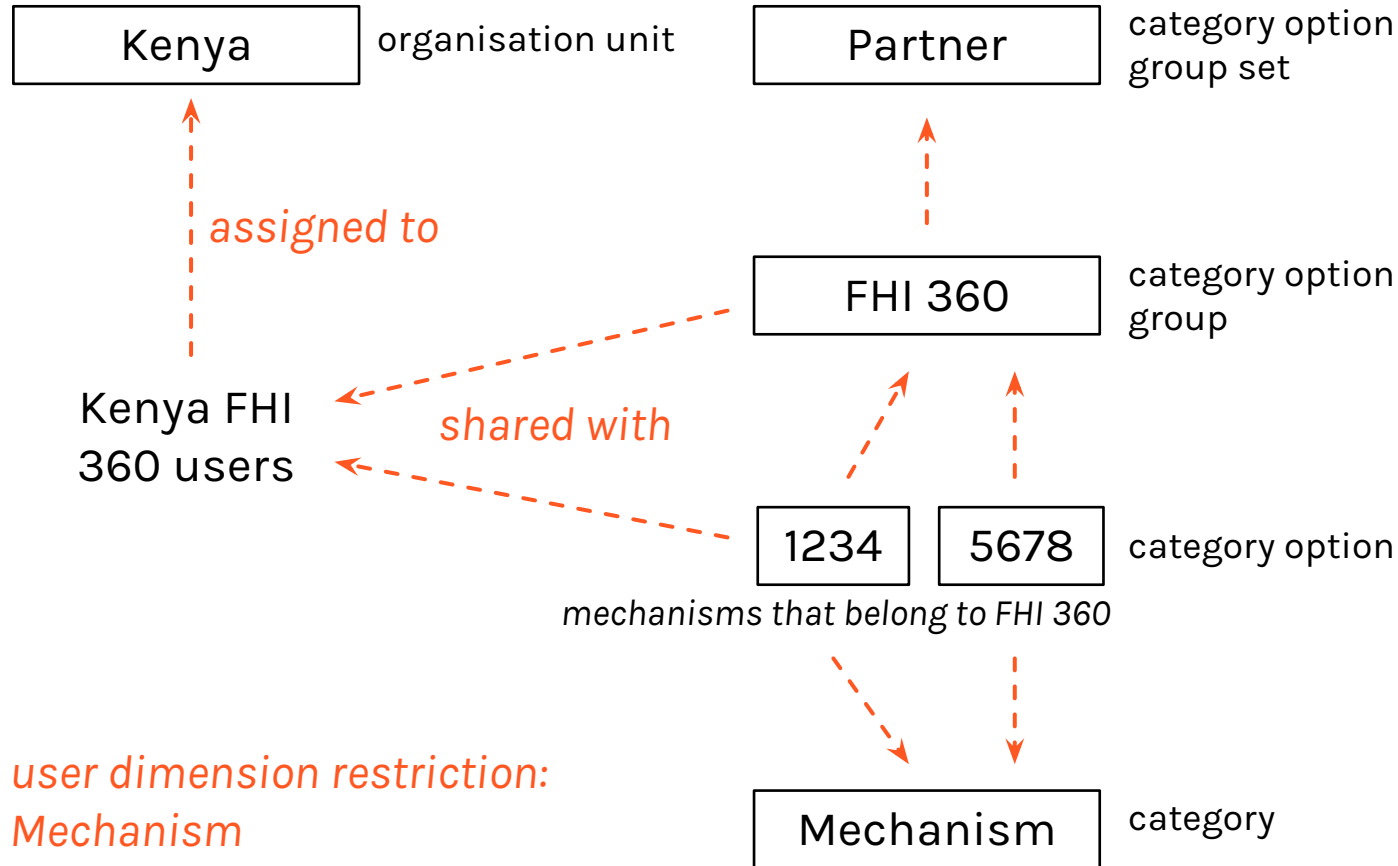
- ▶ global interagency user administrators can manage all users



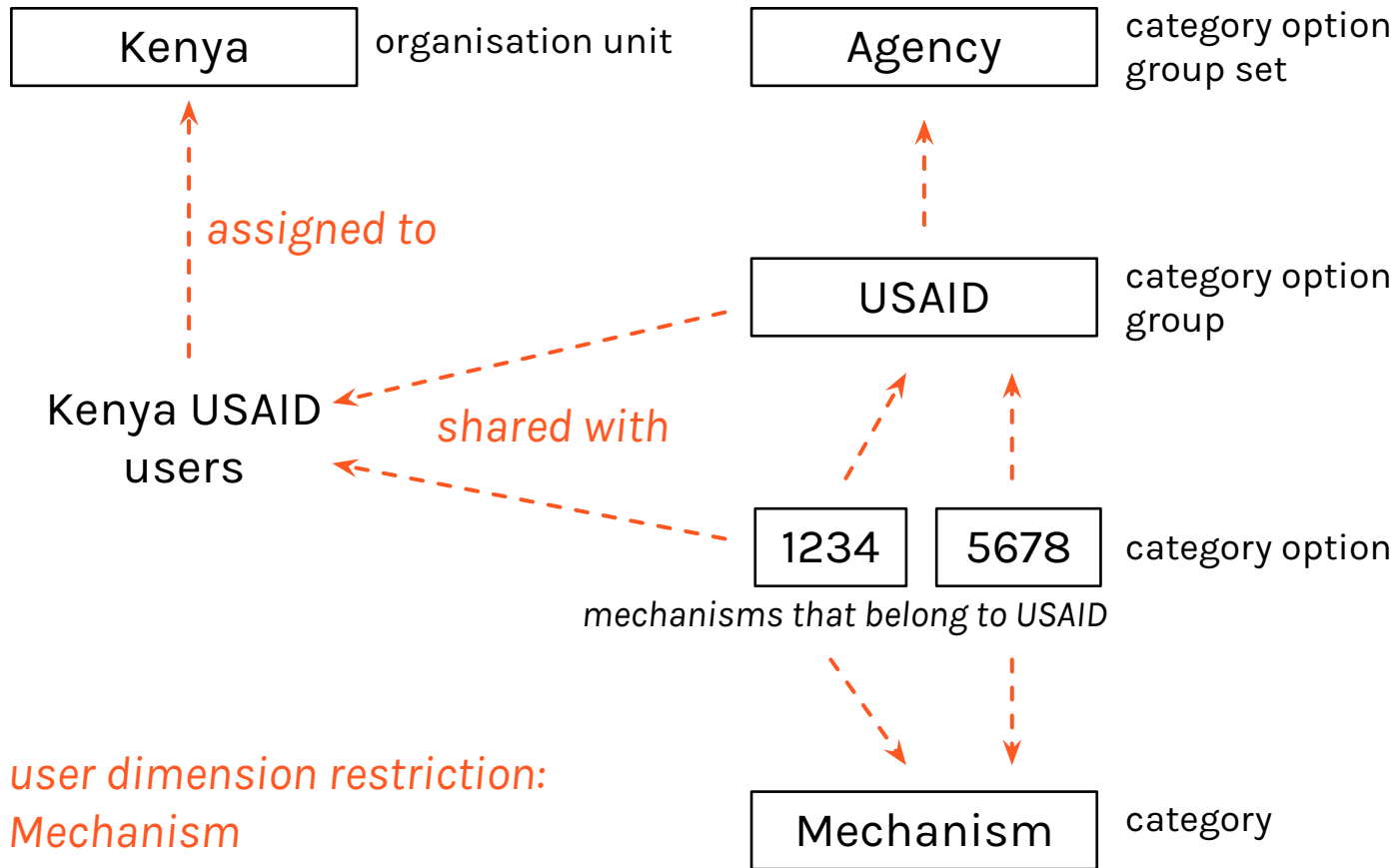
SHARING METADATA

photo by ben grey

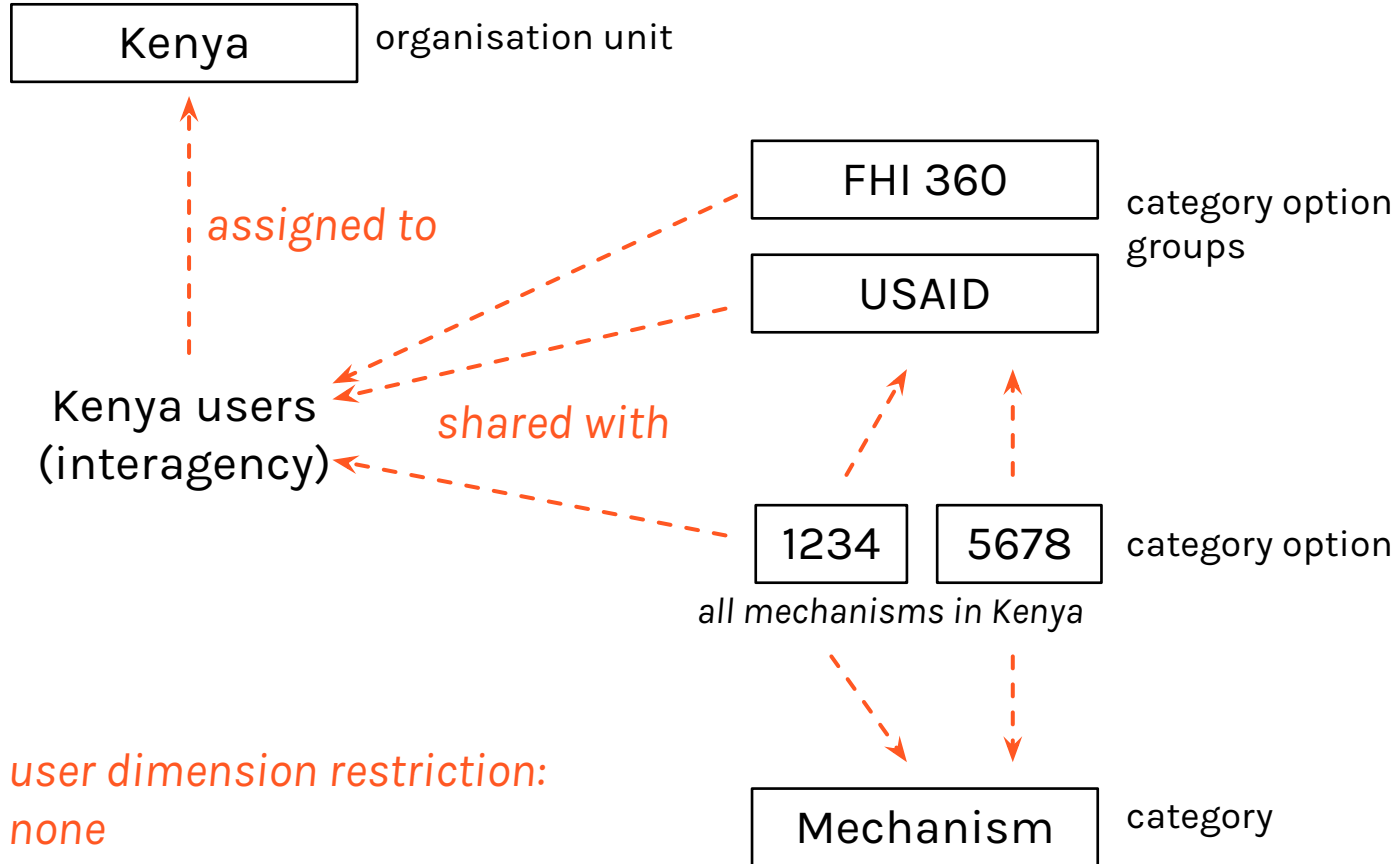
PARTNER USERS SHARING



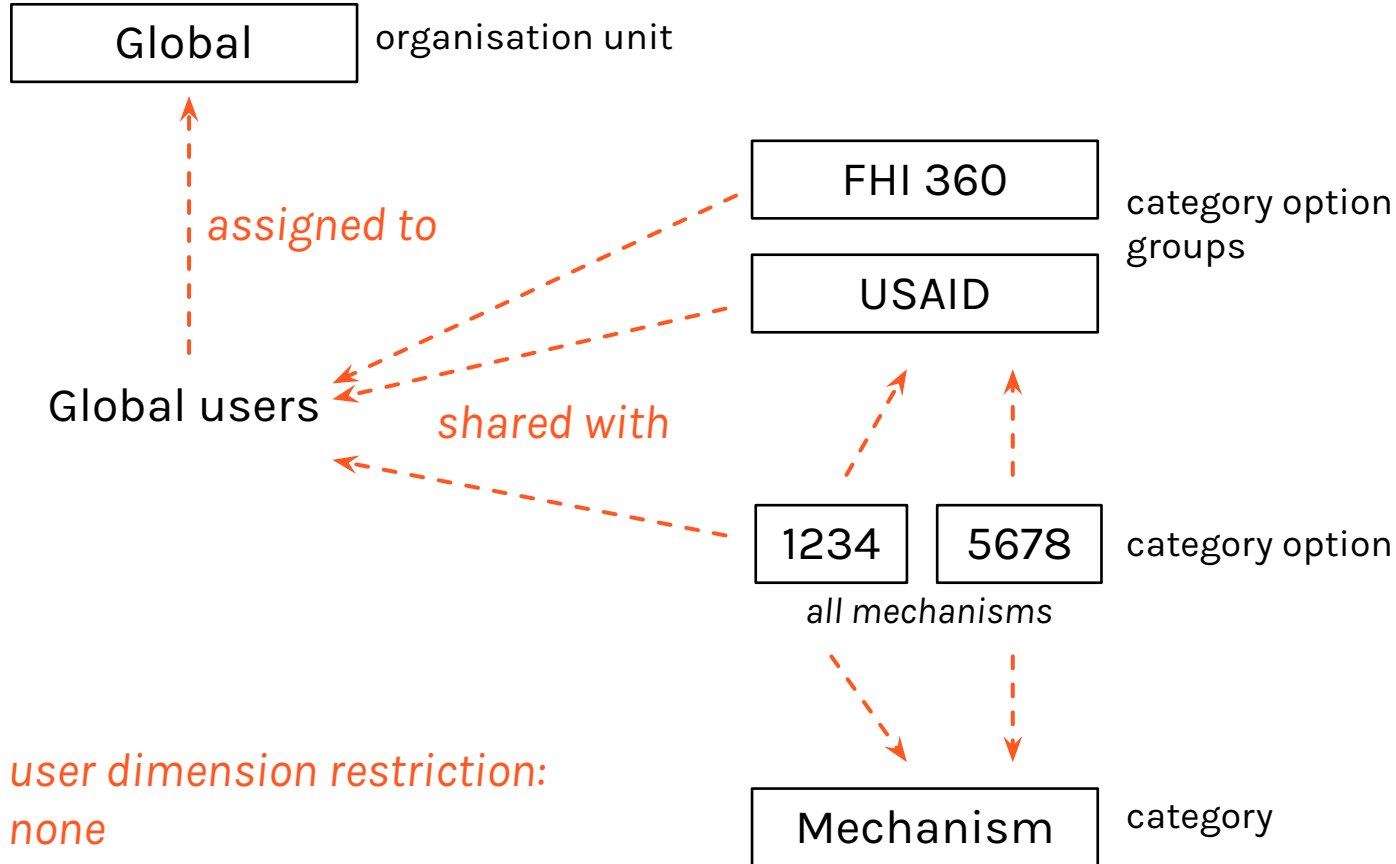
AGENCY USERS SHARING



COUNTRY USERS SHARING



GLOBAL USERS SHARING





COOL STUFF

photo by paxson woelber

COOL STUFF

- ▶ deals with duplicates (agencies and partners with same name; partners with different codes)
- ▶ gets existing objects (partners, agencies, mechanisms in dhis2) and only makes changes when necessary
- ▶ runs on the command line and as a webservice
- ▶ creates deterministic uids

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3.

CODA



THANKS!

Any questions?

Contact: ben@dhis2.org and jim@dhis2.org

This presentation on Github: bit.ly/hispus_cmm